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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,323	01/26/2004	Yoshiyuki Shimamura	1232-5260	9424
27123	7590	04/14/2006	EXAMINER	
MORGAN & FINNEGAN, L.L.P. 3 WORLD FINANCIAL CENTER NEW YORK, NY 10281-2101			UHLENHAKE, JASON S	
			ART UNIT	PAPER NUMBER
			2853	

DATE MAILED: 04/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/765,323	Applicant(s) SHIMAMURA, YOSHIYUKI	
	Examiner Jason Uhlenhake	Art Unit 2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 3/8/2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8 is/are rejected.
- 7) ☒ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 2 is rejected under 35 U.S.C. 112, first paragraph, because the claim recites a single means claims i.e., where a means recitation does not appear in combination with another recited element of means, therefore is subject to an undue breadth rejection. See MPEP § 2164.08(a).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4, 6, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada et al (U.S. Pat. 6,359,701) in view of Arakawa et al (U.S. Pat. 6,067,101) and Shimamura et al (U.S. Pat. 6,652,063).

Yamada et al discloses:

- ***regarding claim 1 and claim 6***, a printing apparatus which needs to periodically execute maintenance operation after activation (Column 18, Lines 24 – 26)

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- counting means, for counting time on the basis of an internal time (Column 18, Lines 34 – 46)
- maintenance designation means for designating execution of the maintenance operation on the basis of the internal time (Column 18, Lines 24 – 26)
- **regarding claim 4**, the apparatus comprises an inkjet printhead which discharges ink and prints (Abstract; Column 1, Lines 58 – 66)
- maintenance operation includes an operation of recovering discharge performance of printhead (Column 11, Lines 9 – 30; Column 46, Lines 38 – 44)
- **regarding claim 8**, wherein the register is a non-volatile storage device (Column 48, Lines 45 – 50)

Yamada et al does not disclose expressly

- **regarding claims 1 and 6**, counting means is operated by power supplied from a battery
- refreshing means for refreshing the internal time with a predetermined time when it is determined that the battery abnormality has occurred based on the result from the determining means
- having a register in which a flag is written when an abnormality occurs in a battery

Arakawa et al discloses

- **regarding claim 1 and claim 6**, flag setting means for setting a flag in a register when a battery abnormality has occurred; determining means for determining whether the battery abnormality has occurred based on the status of the flag set in the

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flag setting means (Column 15, Lines 40 – 47), for the purpose of allowing a quick and reliable judgment for detecting the voltage of the battery

Shimamura et al discloses:

- ***regarding claim 1, and claim 6***, counting means is operated by power supplied from a battery (Column 5, Lines 5 – 13); refreshing means for refreshing the internal time with a predetermined time when it is determined that the battery abnormality has occurred based on the result from the determining means (Figure 12; Column 11, Lines 49 – 59), for the purpose of making a recovery operation for discharge failure in an adequate manner and at a proper timing.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate the teaching of, regarding claims 1 and 6, having a register in which a flag is written when an abnormality occurs in a battery; flag setting means for setting a flag in a register when a battery abnormality has occurred; determining means for determining whether the battery abnormality has occurred based on the status of the flag set in the flag setting means as taught by Arakawa et al and Shimamura et al into the device of Yamada et al. The motivation for doing so would have been to allow a quick and reliable judgment for detecting the voltage of the battery and making a recovery operation for discharge failure in an adequate manner and at a proper timing.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada et al (U.S. Pat. 6,359,701) as modified by Arakawa et al (U.S. Pat. 6,067,101) and

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Shimamura et al (U.S. Pat. 6,652,063) as applied to claim 1 above, and further in view of Miyazawa (U.S. Pat. 6,464,317).

Yamada et al as modified by Arakawa et al and Shimamura et al discloses all of the claimed limitations except:

- ***regarding claim 3***, where the battery of said timer means is so attached to be easily removed externally

Miyazawa discloses:

- ***regarding claim 3***, where the battery of said timer means is so attached to be easily removed externally (Column 1, Lines 12 – 20)

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate the teaching of the battery of said timer means is so attached to be easily removed externally as taught by Miyazawa into the device of Yamada et al as modified by Arakawa et al and Shimamura et al. The motivation for doing so would have been to allow for means for exchanging the battery with a charged battery to allow the printer to continue with its operation.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada et al (U.S. Pat. 6,359,701) as modified by Arakawa et al (U.S. Pat. 6,067,101) and Shimamura et al (U.S. Pat. 6,652,063) as applied to claim 1 above, and further in view of Rezanka (U.S. Pat. 5,751,302).

Yamada et al as modified by Arakawa et al and Shimamura et al discloses all of the claimed limitations except:

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- **regarding claim 5**, printhead comprises a thermal transducer for generating thermal energy to be applied to the ink so as to discharge the ink by using the thermal energy

Rezanka discloses:

- **regarding claim 5**, printhead comprises a thermal transducer for generating thermal energy to be applied to the ink so as to discharge the ink by using the thermal energy (Column 1, Lines 5 – 8, 55 – 67; Column 2, Lines 1 – 6)

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate the teaching of the printhead comprises a thermal transducer for generating thermal energy to be applied to the ink so as to discharge the ink by using the thermal energy as taught by Rezanka into the device of Yamada et al as modified by Arakawa et al and Shimamura et al. The motivation for doing so would have been to cause an ink droplet to be ejected from an ink-ejecting orifice.

Allowable Subject Matter

Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The primary reason for the indication of allowance of claim 7 is the inclusion of a method of controlling a printing apparatus with the limitation of clearing the flag after the

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refreshing step. It is this limitation found in each of the claims, as it is claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

Response to Arguments

Applicant's arguments with respect to claim 1- 8 have been considered but are moot in view of the new ground(s) of rejection. Please see the above rejections regarding Yamada et al (U.S. Pat. 6,359,701) in view of Arakawa et al (U.S. Pat. 6,067,101) and Shimamura et al (U.S. Pat. 6,652,063). They disclose a flag setting means for setting a flag in a register when a battery abnormality has occurred in the counting means, and a refreshing step for refreshing the internal time with a predetermined time when it is determined that the battery abnormality has occurred.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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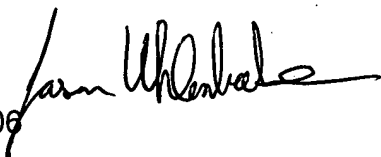
extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Uhlenhake whose telephone number is (571) 272-5916. The examiner can normally be reached on Monday - Friday 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JSU
April 10, 2006



K. FEGGINS 4/10/06
PRIMARY EXAMINER